CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 77-126

NPDES PERMIT NO. CA0038539

WASTE DISCHARGE REQUIREMENTS FOR:

WEST COUNTY AGENCY OF CONTRA COSTA COUNTY, CALIFORNIA, A JOINT POWERS AGENCY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. The West County Agency of Contra Costa County, California (hereinafter called the discharger), a joint powers agency formed between the Richmond Municipal Sewer District and the San Pablo Sanitary District, applied to the Board on July 21, 1977, for waste discharge requirements, and a permit to discharge under the National Pollutant Discharge Elimination System (NPDES).

2. The discharger is a participant in the West Contra Costa County Wastewater Management Study, and proposes to construct an interceptor to convey treated wastewater from the San Pablo sewage treatment plant to Richmond, and an outfall line into San Francisco Bay off Point Richmond to dispose of treated effluent from both the San Pablo and Richmond treatment plants. The outfall will replace two existing near-shore discharge points.

3. The discharger currently discharge a total of 14 million gallons per day (53,000M3/6) and plans to ultimately discharge a maximum of 28.5 million gallons (107,900M3) per day of combined effluent through the outfall. All wastes including wet weather flows will receive full secondary treatment. The outfall is located 4700 feet (1433 meters) offshore of Point Richmond at a depth of 26 feet (7.9 meters) of water (MLLW) at 37°54'14" latitude and 122°24'2" longitude. For the protection of shellfish the outfall will provide a minimum dilution of at least 45:1 under normal conditions. Less dilutions may occur during periods of high delta outflows, but shellfish should nonetheless receive adequate protection during such periods. The outfall and interceptor construction will be completed in January 1980.

4. Section 301(b) of the Federal Water Pollution Control Act Amendments of 1972 requires all publicly-owned treatment plants to achieve effluent limitations based upon secondary treatment no later than July 1, 1977. Secondary treatment has been defined by the EPA Administrator in 40 CFR 133, dated July 26, 1976. The discharger will satisfy this requirement upon commencement of discharge from the new outfall.

5. A Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) was adopted by the Board on April 8, 1975. This Basin Plan contains water quality objectives for the San Francisco Bay.

6. The beneficial uses of the San Francisco Bay are:

   a. Water contact recreation
   b. Non-contact water recreation
   c. Navigation
   d. Open commercial and sport fishing
   e. Wildlife habitat
   f. Fish spawning and migration
   g. Industrial uses
   h. Preservation of rare and endangered species
   i. Shellfishing

7. The discharger has prepared an environmental impact report and statement for the proposed wastewater treatment and outfall facilities, dated February 1976 and amended January 1977 and July 1977, in accordance with the California Environmental Quality Act (Public Resources Code Section 2100, et seq).

8. **The project as approved by the West County Agency will have the following significant effects on the environment as indicated by the final Environmental Impact Report.**

   a. **Potential disruption of operations and damage to facilities due to geologic and flood hazards.**

   b. **Potential odors created by the storage of storm flows in the equalization basins and from the sludge lagoons.**

   c. **An increase in the use of energy for additional treatment at the San Pablo Sanitary District.**

   d. **A decline of air quality due to urban growth accomodated by the project.**

9. **Standard Provision A-1, made part of this Order by Provision D-5 hereof, mitigates or avoids the potential odor problem.**

10. **Conditions of the grant-in-aid for the construction of facilities to comply with the requirements of this Order mitigate or avoid the potential disruption that could result from geologic or flood hazards.**

11. **Changes or alterations could mitigate or avoid increased energy use, and the decline of air quality due to urban growth, are within the jurisdiction of other public agencies and such changes can and should be adopted by such other agencies.**

12. The discharger and interested agencies and persons have been notified of the Board's intent to revise requirements for the existing discharge and have been provided with the opportunity to submit their written views and recommendations.

13. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Federal Water Pollution Control Act Amendments of 1972, and regulations and guidelines adopted thereunder, that the West County Agency of Contra Costa County, California, a joint powers agency, shall comply with the following:

A. Prohibitions

1. Bypass or overflow of untreated wastewater to waters of the State, either at the treatment plant or from the collection system, is prohibited.

2. Average dry weather flow greater than 28.5 million gallons (107,900M3) per day is prohibited. (Average flow shall be determined over three consecutive months each year.)

3. Degradation of harvestable shellfish in the area as a result of the discharge is prohibited.

4. Discharge of waste at any point where it does not receive a minimum initial dilution of 45:1, other than periods when the Delta outflow is greater 8,000 cubic feet (227 M3) per second, is prohibited. During the periods of Delta outfalow greater than 8,000 cubic feet (227 M3) per second, the waste shall receive a minimum initial dilution of 10:1 at all times.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

Constituent	Units	30-Day Average	7-Day Average	Daily Maximum	Instantaneous Maximum
a. Chlorine Residual	mg/l	---	---	---	0.0
b. Biochemical Oxygen Demand	mg/l	30	45	60	---
	lbs/day	7130	10,700	14,260	
	kgs/day	3235	4,850	6,470	
c. Suspended Solids	mg/l	30	45	60	---
	lbs/day	7130	10,700	14,260	
	kgs/day	3235	4,850	6,470	
d. Settleable Matter	ml/l-hr	0.1	---	---	0.2
e. Grease & Oil	mg/l	10	---	20	
	lbs/day	2375	---	4755	
	kgs/day	1080	---	2155	

2. The arithmetic mean of the biochemical oxygen demand (5-day, 20°C) and suspended solids values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (i.e. 85 percent removal).

3. The discharge shall not have a pH of less than 6.0 nor greater than 9.0.

4. In any representative set of samples, the waste as discharged shall meet the following limit of quality:

   TOXICITY: The survival of test fishes in 96-hour bioassays of the effluent as discharged shall be a 90 percentile value of not less than 50 percent survival.

5. Representative samples of the effluent shall not contain constituents in excess of the following limits:

	Unit of Measurement	50% of time	10% of time
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.005	0.01
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Total Identifiable Chlorinated Hydrocarbons 1/	mg/l	0.002	0.004

1/Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

6. The total coliform bacteria for a median of five consecutive effluent samples shall not exceed 240 per 100 milliliters. Any single sample shall not exceed a most probable number (MPN of 10,000 total coliform bacteria when verified by a repeat sample taken within 48 hours).

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in water of the state at any place.

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

d. Visible, floating, suspended or deposited oil or other products of petorleum origin;

e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife or water fowl, of which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved oxygen	5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration than specified above, then discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	Dissolved sulfide	0.1 mg/l maximum
c.	pH	Variation from natural ambient pH by more than 0.2 pH units.
d.	Ammonia (as N) (un-ionized)	Annual median: 0.025 mg/l Maximum at any time: 0.4 mg/l

D. Provisions

1. The discharger shall implement and enforce a source control program approved by the Executive Officer to comply with the State Water Resources Control Board's "Guidelines for Determining the Effectiveness of Local Source Control Programs".

2. The discharger shall comply with all sections of this Order immediately upon commencement of discharge through the subregional outfall.

3. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willfull and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

4. The discharger shall comply with the Self-Monitoring and Reporting Program as ordered by the Executive Officer.

5. The discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements", dated April 1977.

6. This Order expires September 1, 1982. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

7. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on **September 20, 1977.**

FRED H. DIERKER
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

West County Agency of Contra Costa

Contra Costa County

NPDES NO. CA 0038539

ORDER NO. 77-126

CONSISTS OF

PART A 7/74

AND

PART B

October 11, 1977
Date ordered

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE (SAN PABLO AND RICHMOND TREATMENT PLANTS)

Station	Description
A-1	At any point in the San Pablo Sanitary District treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.
A-2	At any point in the City of Richmond treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT (SAN PABLO AND RICHMOND TREATMENT PLANTS AND OUTFALL)

Station	Description
E-001	At any point in the joint outfall between the point of discharge and the point at which all waste tributary to that outfall is present. (May be the same as E-001-D)
E-001-D	At any point in the disinfection facilities for Waste E-001, at which point adequate contact with the disinfectant is assured.

C. RECEIVING WATERS

Station	Description
C-1	At a point in San Francisco Bay, located directly above the center of the diffuser.
C-2-N C-2-S C-2-E C-2-W	At a point in San Francisco Bay, located 200 feet north, south, east and west, respectively, of the center of the diffuser.
C-3-N C-3-S C-3-E C-3-W	At a point in San Francisco Bay, located 1000 feet north, south, east and west, respectively, of the center of the diffuser.

D. LAND OBSERVATIONS (SAN PABLO AND RICHMOND TREATMENT PLANTS)

Station	Description
P-1 through P-'n'	Located at the corners and midpoints of the perimeter fenceline surrounding the treatment facilities. (A sketch showing the locations of these stations will accompany each report.)

E. OVERFLOWS AND BYPASSES (SAN PABLO AND RICHMOND TREATMENT PLANTS AND OUTFALL)

Station	Description
O-1 through O-'n'	Bypass or overflows from manholes, pump stations or collection system.

Note: Initial SMP report to include map and description of each known bypass or overflow location.

Reporting - Shall be submitted monthly and include date, time and period of each overflow or bypass.

F. BOTTOM SEDIMENTS

A schedule for bottom sediment sampling and analysis will be determined at a future date.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling, and analysis shall be that given as Table I.

B. The sampling schedule shall be arranged so that individual treatment plant effluent qualities can be compared to combined effluent quality, so that any violation of requirements can be traced to its source.

III. MODIFICATION OF PART A

The following paragraphs of Part A do not apply: C.3., C.5.d.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 77-126.

2. Has been ordered by the Executive Officer on October 11, 1977 and shall become effective upon commencement of discharge.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Date Ordered October 11, 1977

Attachment:
Table I

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A	E-001			E-001-D		All C Sta	All P Sta	B	All O Sta			
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	G	O	BS	O			
Flow Rate (mgd)	D			D									
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	5/W		5/W										
Chlorine Residual & Desage (mg/l & kg/day)					2H or cont								
Settleable Matter (ml/1-hr. & cu. ft./day)		D											
Total Suspended Matter (mg/l & kg/day)	5/W		5/W										
Oil & Grease (mg/l & kg/day)	2/W		2/W										
Coliform (Total) (MPN/100 ml) per req't					3/W		M						
Fish Toxicity, 96-hr. TL_{50} % Survival in undiluted waste						M							
Ammonia Nitrogen (mg/l & kg/day)			M				2/Y						
Nitrate Nitrogen (mg/l & kg/day)			M				2/Y						
Nitrite Nitrogen (mg/l & kg/day)			M				2/Y						
Total Organic Nitrogen (mg/l & kg/day)			M				2/Y						
Total Phosphate (mg/l & kg/day)			M				2/Y						
Turbidity (Jackson Turbidity Units)			2W				M						
pH (units)		D					M						
Dissolved Oxygen (mg/l and % Saturation)		D					M						
Temperature (°C)		D					M						
Apparent Color (color units)			2W				M						
Secchi Disc (inches)							M						
Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)		2/W					M						
Arsenic (mg/l & kg/day)			3M										
Cadmium (mg/l & kg/day)			3M										
Chromium, Total (mg/l & kg/day)			3M										
Copper (mg/l & kg/day)			3M										
Cyanide (mg/l & kg/day)			3M										
Silver (mg/l & kg/day			3M										
Lead (mg/l & kg/day)			3M										

TABLE 1 (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A	E-001			E-001-D		All C Sta	All P Sta	B	All O Sta			
TYPE OF SAMPLE	C-24	G	C-24	cont.	G	C-24	G	O	BS	O			
Mercury (mg/l & kg/day)			3M										
Nickel (mg/l & kg/day)			3M										
Zinc (mg/l & kg/day)			3M										
PHENOLIC COMPOUNDS (mg/l & kg/day)			3M										
All Applicable Standard Observations		D					M	2/W		E			
Bottom Sediment Analyses and Observations &Shellfish Area									2/Y				
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)			3M										

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
Cont = continuous sampling
DI = depth-integrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations
G = groundwater stations

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in March and once in September
Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous